**Fig. 1**

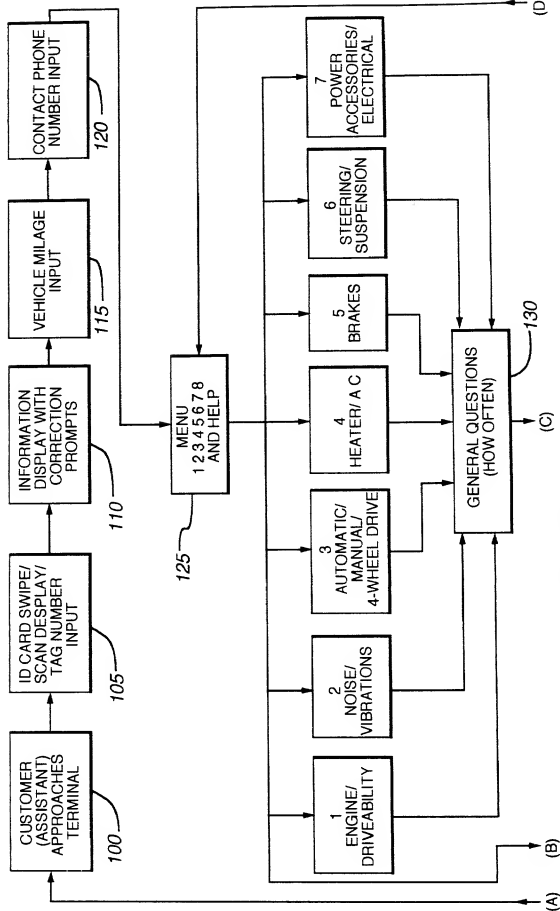


Fig. 2A

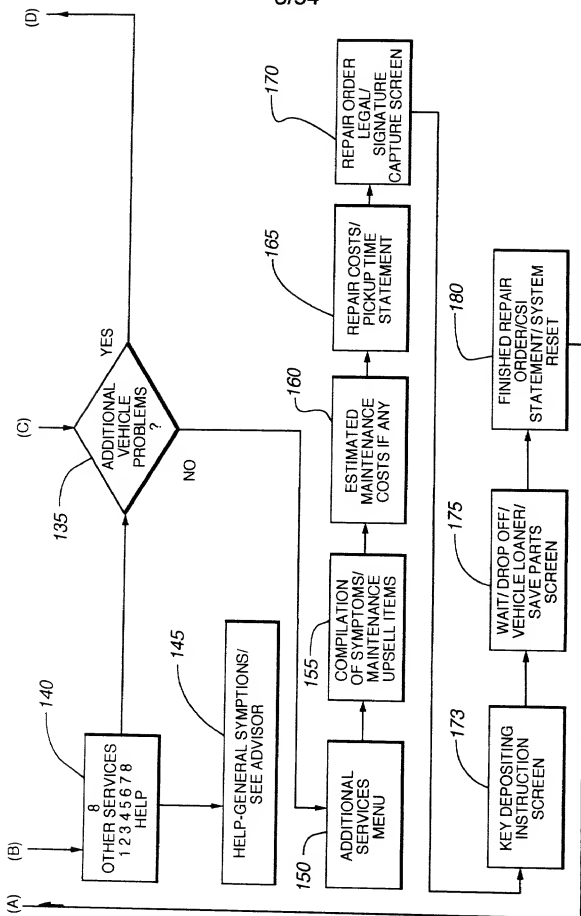


Fig. 2B

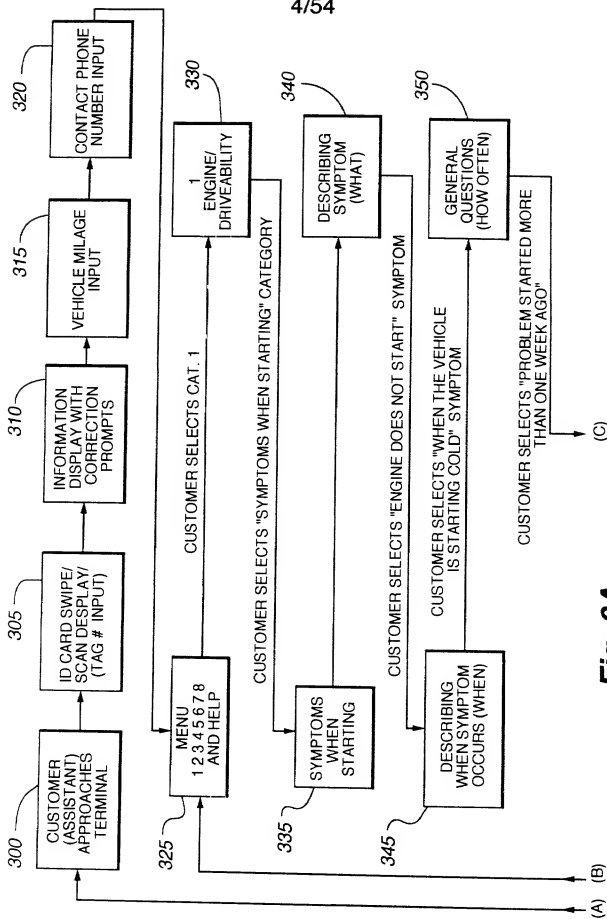


Fig. 3A

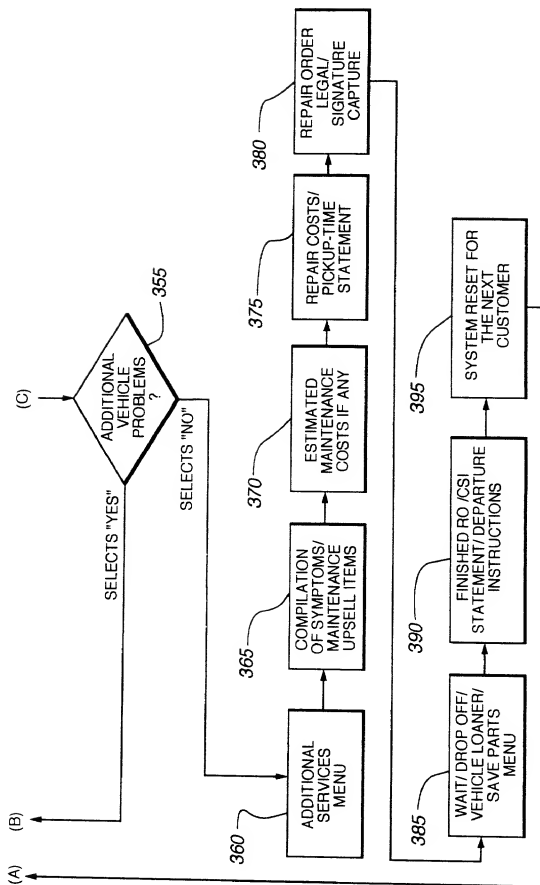
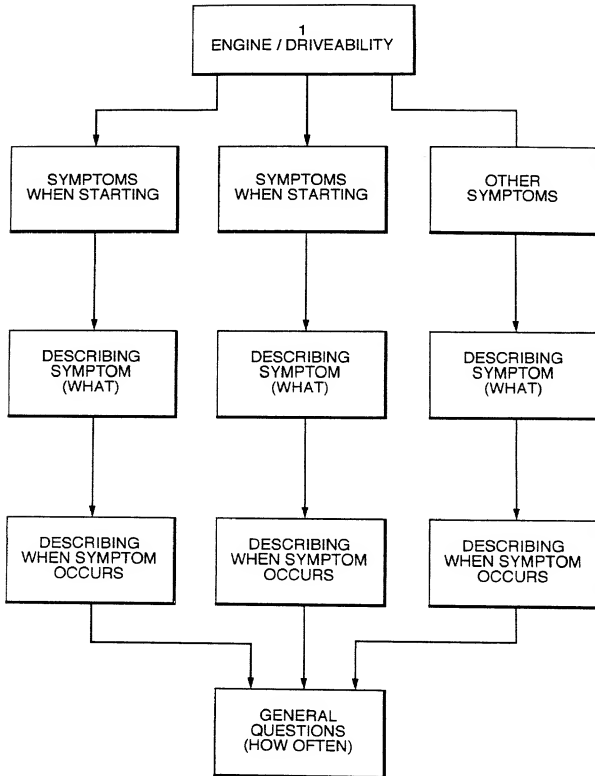
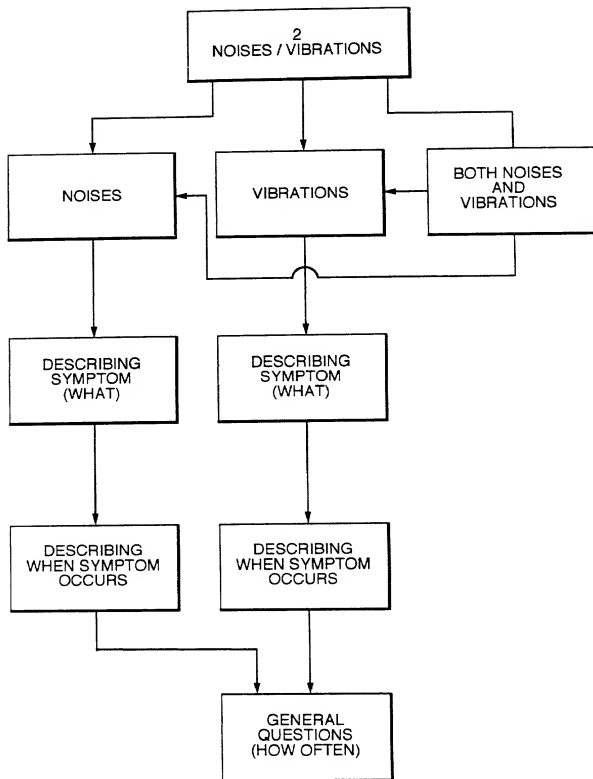
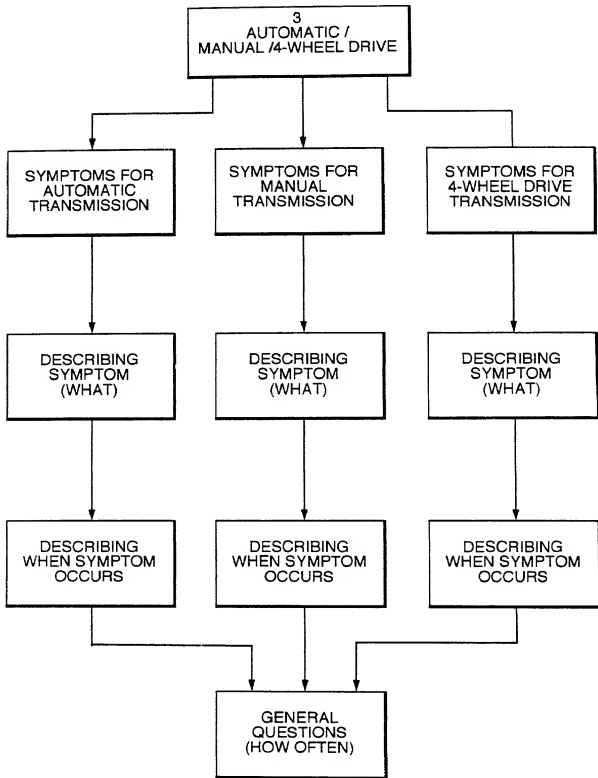


Fig. 3B

**Fig. 4**

**Fig. 5**

**Fig. 6**

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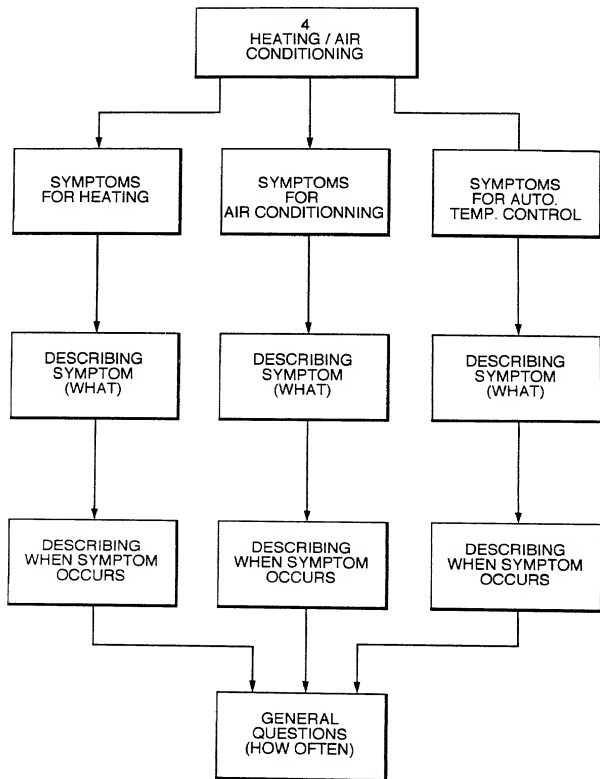
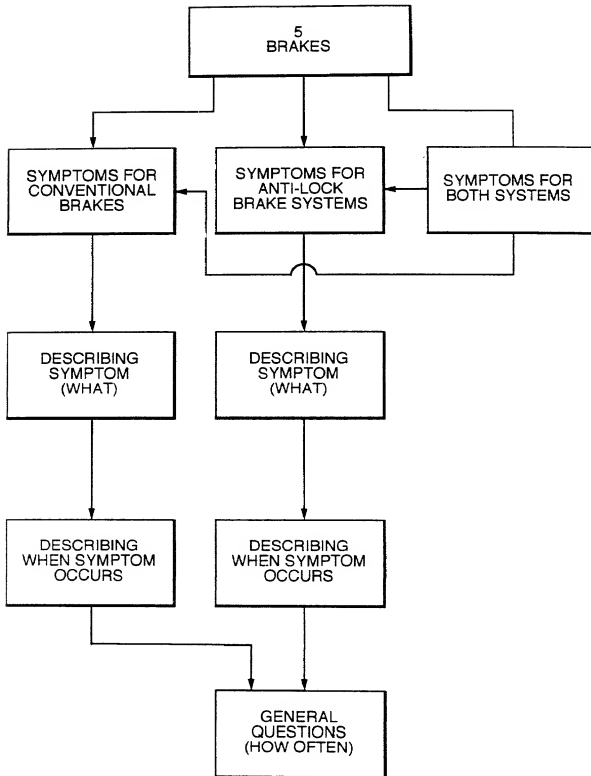
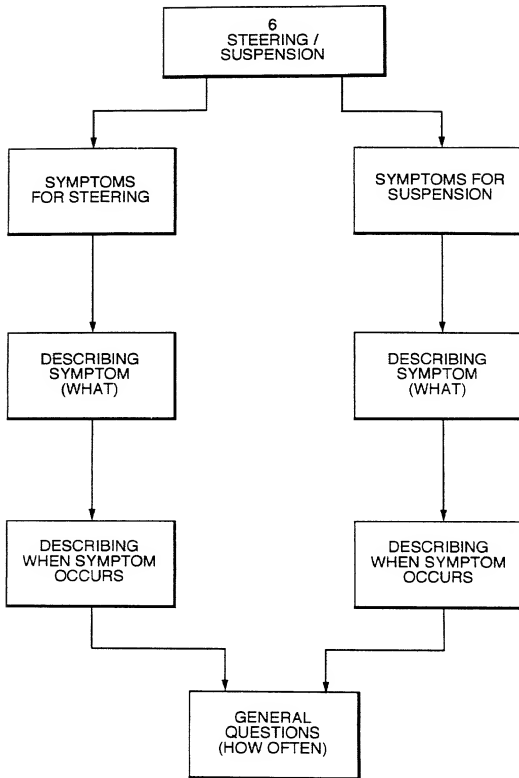


Fig. 7

**Fig. 8**

**Fig. 9**

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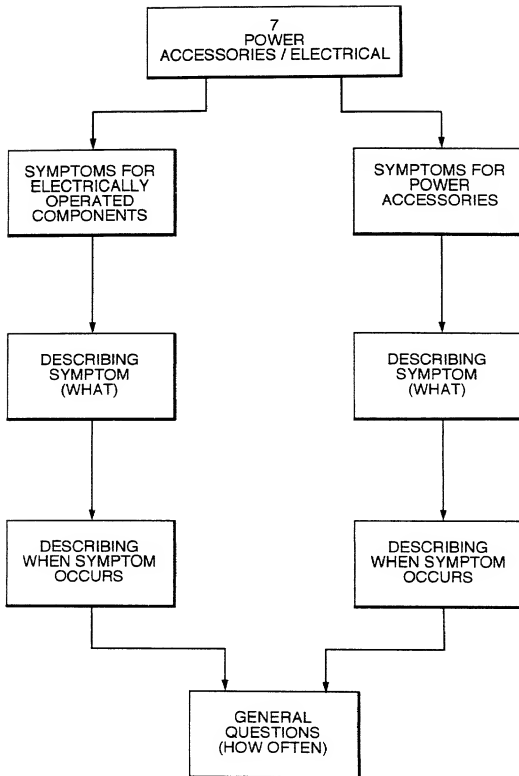
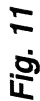


Fig. 10



SCAN VEHICLE AND TAG: _____

ENTER TAG #

440

C

<

1

2

3

4

5

6

7

8

9

0

DONE

EXIT

OK

Fig. 12B

SCAN VEHICLE AND TAG: _____

VEHICLE DATA:

VEHICLE ID:

TAG NUMBER:

ENTER TAG #

EXIT

OK

Fig. 12A

CUSTOMER'S INFORMATION:

CUSTOMER INFORMATION:

JOHN DOE

CHANGE

1234 HIS WAY ST.

CHANGE

ANYTOWN, USA 12345

CHANGE

CUSTOMER VEHICLE

VEHICLE LICENSE #:

CHANGE BRT-1234

VEHICLE DESCRIPTION:

DODGE RAM 350, FORREST GREEN, 2001

OK BACK

Fig. 12D

CUSTOMER'S INFORMATION:

CUSTOMER INFORMATION:

JOHN DOE

CHANGE

1234 HIS WAY ST.

CHANGE

ANYTOWN, USA 12345

CHANGE

CITY, STATE, ZIP:

ANYTOWN, USA 12345

1 2 3 4 5 6 7 8 9 0 -

Q W E R T Y U I O P

A S D F G H J K L

Z X C V B N M .

CLEAR SPACE DONE

Fig. 12C

302907-6874660

ENTER VEHICLR MILAGE: _____

ENTER MILAGE: _____

C	<				
1	2	3			
4	5	6			
7	8	9			
0	DONE				

VEHICLE _____ CH _____

DONE BACK HELP

Fig. 12F

ENTER VEHICLR MILAGE: _____

VEHICLE MILAGE: _____

CHANGE _____

DONE BACK HELP

Fig. 12E

MAIN MENU

PLEASE INDICATE THE GENERAL AREA IN WHICH THE PROBLEM IS OCCURRING. IF YOUR VEHICLE REQUIRES ONLY MAINTENANCE SERVICE, AND THERE ARE NO PROBLEMS AT THE PRESENT TIME, PLEASE PRESS NUMBER EIGHT ON THE SERVICE MENU. IF YOUR PROBLEM OR REQUEST DOES NOT FALL WITHIN THE CATEGORIES LISTED, PRESS NUMBER EIGHT.

TOUCH THE AREA OR AREAS BELOW, THEN TOUCH DONE.

☐ 1. ENGINE / DRIVEABILITY

☐ 2. NOISES / VIBRATIONS

☐ 3. AUTOMATIC / MANUAL / 4 WHEEL DRIVE TRANSMISSION

☐ 4. HEATER / AIR CONDITIONING

☐ 5. BRAKES

☐ 6. STEERING / SUSPENSION

☐ 7. POWER ACCESSORIES / ELECTRICAL

☐ 8. OTHER SERVICES

Fig. 13

ENTER CONTACT PHONE NUMBERS:

WELCOME TO THE JACK'S BMW. THIS SERVICE EXPRESS WRITER IS DESIGNED TO LESSEN YOUR TIME, WAITING FOR SERVICE, AT THE SAME TIME IT INCREASES THE ACCURACY OF THE DESCRIPTION OF YOUR PROBLEM GIVEN TO THE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. WE HOPE YOU ENJOY THE EXPERIENCE.

PLEASE ENTER THE PHONE NUMBER(S) WHERE YOU CAN BE REACHED AT TODAY

PHONE NUMBERS:

Fig. 12G

ENGINE / DRIVEABILITY SECTION

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM. PLEASE ONLY USE THE PEN PROVIDED TO YOU.

1. SYMPTOMS WHEN STARTING
2. SYMPTOMS WHEN DRIVING
3. OTHER SYMPTOMS

1

2

3

BACK

HELP

SYMPTOMS WHEN STARTING:

TOUCH THE APPROPRIATE SYMPTOM OR SYMPTOMS BELOW.

☐ DOES NOT TURN OVER

☐ TURNS OVER, BUT DOES NOT START.

☐ TURNS OVER SLOWLY.

☐ TURNS OVER PROPERLY, BUT STARTS HARD.

☐ TAKES TOO LONG BEFORE IT STARTS.

☐ I MUST PRESS THE GAS PEDAL HARD TO MAKE THE ENGINE START.

☐ STARTS OK, BUT THAN STALLS.

☐ NONE OF THE ABOVE STARTING SYMPTOMS.

OK

BACK

HELP

Fig. 14B

Fig. 14A

<p>WHEN DO YOU NOTICE IT: _____ WHEN DO YOU NOTICE THE SYMPTOMS? TOUCH THE APPROPRIATE BOX OR BOXES.</p>	<p>WHEN THE ENGINE TEMPERATURE SHOWS: _____ <input type="radio"/> COLD <input checked="" type="radio"/> NORMAL <input type="radio"/> HOT <input type="radio"/> ANY TEMP</p>	<p>WHEN THE ENGINE'S RPM SHOWS: _____ <input type="radio"/> BELOW 1000 <input type="radio"/> 1000 TO 2000 <input type="radio"/> 2000 TO 4000 <input type="radio"/> OVER 4000 RPM <input checked="" type="radio"/> NOT APPLICABLE</p>	<p>WHEN THE VEHICLE IS: _____ <input type="radio"/> WARMING UP <input type="radio"/> STARTING COLD <input type="radio"/> RESTARTING HOT <input checked="" type="radio"/> NOT APPLICABLE</p>	<p>DOES THE "CHECK ENGINE" LIGHT COME ON: _____ <input type="radio"/> YES <input checked="" type="radio"/> NO</p>	<p>THE SYMPTOMS OCCURE WHEN MY VEHICLE'S SPEED IS (MPH) _____ <input type="radio"/> 0 TO 20 <input type="radio"/> 20 TO 35 <input type="radio"/> 35 TO 55 <input type="radio"/> OVER 55 MPH <input checked="" type="radio"/> DOESN'T MATTER</p>	<p>THE SYMPTOM OCCURES WHEN I DRIVE FOR: _____ <input type="radio"/> UNDER 5 MILES <input type="radio"/> 5 TO 10 MILES <input type="radio"/> OVER 10 MILES <input checked="" type="radio"/> DOESN'T MATTER</p>	<p>SYMPTOMS WHEN DRIVING: _____ TOUCH THE APPROPRIATE SYMPTOM OR SYMPTOMS BELOW.</p>
<p> <input type="checkbox"/> HESITATES OR STALLS WHEN SPEEDING UP. <input type="checkbox"/> STALLS WHEN I SLOW DOWN OR STOP. <input type="checkbox"/> STALLS WHEN TURNING RIGHT OR LEFT. <input type="checkbox"/> LACKS POWER AT HIGHWAY SPEED. <input type="checkbox"/> LACKS POWER BELOW HIGHWAY (CITY) SPEEDS. <input type="checkbox"/> ENGINE BACKFIRES (LOUD POPPING NOISE) ENGINE KEEPS RUNNING WHEN IGNITION KEY IS OFF. <input type="checkbox"/> SPEEDS UP OR SLOWS DOWN UNEXPECTEDLY. <input type="checkbox"/> <u>POOR FUEL ECONOMY.</u> <input type="checkbox"/> NONE OF THE ABOVE DRIVING SYMPTOMS. </p>							
<p> <input type="button" value="OK"/> <input type="button" value="BACK"/> <input type="button" value="HELP"/> </p>							

Fig. 14D

Fig. 14C

NOISE OR VIBRATION SELECTION:

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM.

1. NOISES-WHAT YOU CAN HEAR.
2. VIBRATIONS-WHAT YOU CAN FEEL.
3. BOTH NOISES AND VIBRATIONS.

1

2

3

BACK

HELP

NOISE INFORMATION:

LISTED BELOW ARE EXAMPLES OF NOISES COMMONLY FOUND COMING FROM YOUR VEHICLE. TOUCH THE APPROPRIATE BOX OR BOXES THAT BEST DESCRIBES THE NOISES YOU ARE HEARING.

- | | |
|----------------------------------|--|
| <input type="checkbox"/> SQUEAK | <input type="checkbox"/> TAP |
| <input type="checkbox"/> RATTLE | <input type="checkbox"/> CLICK |
| <input type="checkbox"/> WHISTLE | <input type="checkbox"/> GRIND |
| <input type="checkbox"/> HUM | <input type="checkbox"/> GROWL |
| <input type="checkbox"/> BUZZ | <input type="checkbox"/> KNOCK |
| <input type="checkbox"/> CHIRP | <input type="checkbox"/> METAL CLANG |
| <input type="checkbox"/> SQUEAL | <input type="checkbox"/> RUMBLE |
| <input type="checkbox"/> CLUNK | <input type="checkbox"/> NONE OF THE ABOVE |

OK

BACK

HELP

Fig. 15A

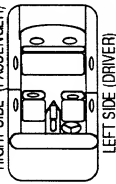
Fig. 15B

WHERE IS IT COMING FROM:

PLEASE INDICATE THE APPROPRIATE AREA THE NOISE AND/OR VIBRATION SEEMS TO COME FROM TOUCH THE LOCATION OF THE PROBLEM ON THE APPROPRIATE ILLUSTRATION.

INSIDE THE VEHICLE

RIGHT SIDE (PASSENGER)



LEFT SIDE (DRIVER)

CLEAR DOT

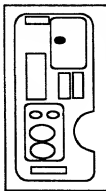
UNDER THE VEHICLE

RIGHT SIDE (PASSENGER)



LEFT SIDE (DRIVER)

CLEAR DOT



CLEAR DOT

OK

BACK

HELP

Fig. 15C

WHEN DOES IT HAPPEN:

WHEN DO YOU NOTICE THE NOISE AND /VIBRATION PLEASE ANSWER THE QUESTIONS BY TOUCHING THE APPROPRIATE BOX OR BOXES WITH THE PROVIDED PEN.

IT OCCURS WHEN THE VEHICLE IS:

☐ MOVING ☐ NOT MOVING ☒ BOTH

MOST LIKELY OCCURS WHEN I AM:

☐ PRESSING HARD ON THE GAS PEDAL.

☐ PRESSING MEDIUM TO LIGHT ON THE GAS PEDAL.

☐ DRIVING, LETTING UP ON THE GAS.

☐ CRUISING AT A CONSTANT SPEED.

☐ BREAKING HARD. ☐ BRAKING NORMALLY.

☐ TURNING LEFT. ☐ TURNING RIGHT.

☒ NONE OF THE ABOVE.

AT WHAT SPEED (MPH):

☐ 0 TO 5

☐ 5 TO 20

☐ 20 TO 45

☐ 45 TO 55

☐ OVER 55 MPH ☒ DOESN'T MATTER

ON WHAT KINDS OF ROADS:

☐ SMOOTH PAVED

☐ POTHOLES

☐ DIRT ☐ WET OR SNOW COVERED PAVED

☒ DOESN'T MATTER ☐ ROUGH PAVED

OK

BACK

HELP

Fig. 15D

VIBRATION INFORMATION:

LISTED BELOW ARE EXAMPLES OF VIBRATIONS COMMONLY FOUND COMING FROM YOUR VEHICLE. TOUCH THE APPROPRIATE BOX OR BOXES THAT BEST DESCRIBES THE VIBRATIONS YOU ARE FEELING

- | | |
|------------------------------------|---|
| <input type="checkbox"/> SHAKING | <input checked="" type="checkbox"/> SHUDDER |
| <input type="checkbox"/> THUMPING | <input type="checkbox"/> PULSATION |
| <input type="checkbox"/> TREMBLING | <input type="checkbox"/> MOAN |
| <input type="checkbox"/> BOOM | <input type="checkbox"/> ROUGHNESS |
| <input type="checkbox"/> BUZZING | <input type="checkbox"/> TINGLING |
| <input type="checkbox"/> CLUNK | <input type="checkbox"/> RUMBLE |
| <input type="checkbox"/> CHATTER | <input type="checkbox"/> SHIMMY |
| | <input type="checkbox"/> NONE OF THE ABOVE |

OK

BACK

HELP

TRANSMISSION INFORMATION:

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM. PLEASE ONLY USE THE PEN PROVIDED TO YOU.

1. AUTOMATIC TRANSMISSION
2. MANUAL TRANSMISSION
3. FOUR WHEEL DRIVE

1

2

3

BACK

HELP

Fig. 15E

Fig. 16A

AUTOMATIC TRANSMISSION:

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM

- ☐ DOESN'T SHIFT UP.
- ☐ DOESN'T SHIFT DOWN.
- ☐ DELAYS ENGAGEMENT IN FORWARD GEAR.
- ☐ DELAYS ENGAGEMENT IN REVERSE GEAR.
- ☐ SHIFT IS ROUGH OR HARSH.
- ☐ SHIFT IS SLOW-SEEMS TO SLIP.
- ☐ SHIFT IS TOO EARLY.
- ☐ ENGINE RACES OR INCREASES RPM WHEN SHIFTING
- ☐ TRANSMISSION MAKES UNUSUAL NOISES.
- ☐ OIL OR FLUID LEAK COMING FROM TRANSMISSION.
- ☐ NONE OF THE ABOVE SYMPTOMS.

OK

BACK

HELP

Fig. 16B**MANUAL TRANSMISSION:**

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

- ☐ DOESN'T GO INTO ANY GEAR
- ☐ CLUTCH SEEMS TO SLIP GOING INTO GEAR.
- ☐ CHATTERS GOING INTO GEAR.
- ☐ MAKES A GRINDING NOISE GOING INTO GEAR
- ☐ CLUTCH SEEMS HARD TO DEPRESS.
- ☐ CLUTCH SEEMS SOFT TO DEPRESS.
- ☐ CLUTCH PEDAL ENGAGES TOO HIGH.
- ☐ CLUTCH PEDAL ENGAGES TOO LOW.
- ☐ POPS OUT OF GEAR.
- ☐ OIL OR FLUID LEAKING FROM TRANSMISSION.
- ☐ NONE OF THE ABOVE SYMPTOMS.

OK

BACK

HELP

Fig. 16C

FOUR WHEEL DRIVE:

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

DOESN'T SHIFT INTO 4WD HI

DOESN'T SHIFT INTO 4WD LOW.

MAKES A GRINDING NOISE GOING INTO 4WD

4WD LIGHT DOESN'T COME ON.

4WD FRONT HUBS DON'T ENGAGE.

HARD TO TAKE OUT OF 4WD.

WHEN DOES IT HAPPEN:

WHEN DO YOU NOTICE THE SYMPTOM(S). TOUCH THE APPROPRIATE BOX OR BOXES BELOW IN WHAT GEAR DOES THE SYMPTOM SHOW:

AUTOMATIC TRANSMISSION:

☐ PARK ☐ REVERSE ☐ NEUTRAL

☐ OD ☐ D ☐ 2 ☐ 1 ☒ ANY GEAR.

MANUAL TRANSMISSION:

☐ 01 ☐ 02 ☐ 03 ☐ 04 ☐ 05 ☐ 06

☐ NEUTRAL ☒ ANY GEAR

THE SYSTEM SHOWS WHEN THE VEHICLE IS:

☒ ACCELERATING ☐ STANDING STILL ☐ BRAKING

☐ TURNING ☐ SLOWING DOWN ☐ DRIVING UPHILL

THE SYMPTOM OCCURS WHEN I DRIVE FOR:

☐ UNDER 5 MILES ☐ 5 TO 10 MILES

☒ OVER 10 MILES

MY VEHICLE'S ENGINE TEMPERATURE READS:

☐ COLD ☒ NORMAL ☐ HOT

Fig. 16E

FOUR WHEEL DRIVE:

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

DOESN'T SHIFT INTO 4WD HI

DOESN'T SHIFT INTO 4WD LOW.

MAKES A GRINDING NOISE GOING INTO 4WD

4WD LIGHT DOESN'T COME ON.

4WD FRONT HUBS DON'T ENGAGE.

HARD TO TAKE OUT OF 4WD.

WHEN DOES IT HAPPEN:

WHEN DO YOU NOTICE THE SYMPTOM(S). TOUCH THE APPROPRIATE BOX OR BOXES BELOW IN WHAT GEAR DOES THE SYMPTOM SHOW:

AUTOMATIC TRANSMISSION:

☐ PARK ☐ REVERSE ☐ NEUTRAL

☐ OD ☐ D ☐ 2 ☐ 1 ☒ ANY GEAR.

MANUAL TRANSMISSION:

☐ 01 ☐ 02 ☐ 03 ☐ 04 ☐ 05 ☐ 06

☐ NEUTRAL ☒ ANY GEAR

THE SYSTEM SHOWS WHEN THE VEHICLE IS:

☒ ACCELERATING ☐ STANDING STILL ☐ BRAKING

☐ TURNING ☐ SLOWING DOWN ☐ DRIVING UPHILL

THE SYMPTOM OCCURS WHEN I DRIVE FOR:

☐ UNDER 5 MILES ☐ 5 TO 10 MILES

☒ OVER 10 MILES

MY VEHICLE'S ENGINE TEMPERATURE READS:

☐ COLD ☒ NORMAL ☐ HOT

Fig. 16D

WHEN DOES IT HAPPEN: _____
 WHEN DO YOU NOTICE THE SYMPTOM(S)
 TOUCH THE APPROPRIATE BOX OR BOXES BELOW.

WHEN THE SELECTOR CONTROL IS: _____
☐ FLOOR ☐ MIX ☐ VENT ☐ DEFROST
☒ DOESN'T MATTER

WHEN THE TEMPERATURE CONTROL IS: _____
☐ COOL ☐ WARM ☐ NORMAL A/C ☐ MAX A/C
☐ DEFROST ☒ DOESN'T MATTER

WHEN I AM MOVING THE SELECTOR OR
 CHANGING THE TEMPERATURE: _____
☐ YES ☒ NO

WHEN THE VEHICLE IS: _____
☐ STOPPED ☐ ACCELERATING FROM STOP
☐ MOVING ☐ DECELERATING ☒ DOESN'T MATTER

WHEN THE VEHICLE TEMPERATURE IS: _____
☐ COLD ☐ NORMAL ☐ HOT ☒ DOESN'T MATTER

Fig. 17E

—BRAKE SYSTEM:

THE FOLLOWING QUESTIONS ARE DESIGNED TO
DELIVER VALUABLE INFORMATION TO THE
SERVICE TECHNICIAN WHO WILL WORK ON YOUR
VEHICLE. PLEASE TOUCH THE APPROPRIATE
NUMBER FOR YOUR VEHICLE'S SYMPTOMS.

1. CONVENTIONAL BRAKE SYSTEM.
2. ANTI LOCK BRAKE SYSTEM.
3. BOTH SYSTEMS.

1

2

3

BACK

HELP

CONVENTIONAL BRAKE SYSTEM

TOUCH THE APPROPRIATE BOX OR BOXES THAT
BEST DESCRIBES WHAT YOU ARE NOTICING.

- ☐ BRAKE PEDAL SEEMS TO PULSATE.
- ☐ PULLS RIGHT OR LEFT WHEN STOPPING.
- ☐ GRINDING NOISE WHEN STOPPING.
- ☐ SQUEAKS WHEN STOPPING.
- ☐ BRAKE PEDAL FADES (GOES TO THE FLOOR)
- ☐ BRAKE PEDAL SEEMS LOW.
- ☐ BRAKING EFFORT SEEMS EXCESSIVE.
- ☐ BRAKE LIGHT ON.
- ☐ NONE OF THE ABOVE SYMPTOMS.

OK

BACK

HELP

Fig. 18A**Fig. 18B**

<p>ANTI-LOCK BRAKING SYSTEM: _____</p> <p>TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES WHAT YOU ARE NOTICING.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <input type="checkbox"/> ANTI-LOCK BRAKES SEEM INOPERABLE. <input type="checkbox"/> ANTI-LOCK BRAKE LIGHT IS ON CONSTANTLY. <input type="checkbox"/> ANTI-LOCK BRAKE LIGHT IS ON INTERMITTENTLY. <input type="checkbox"/> NONE OF THE ABOVE. </div>	<p>WHEN DOES IT HAPPEN: _____</p> <p>WHEN DO YOU NOTICE THE SYMPTOM(S). PLEASE ANSWER THE QUESTIONS BY TOUCHING THE APPROPRIATE BOX OR BOXES WITH THE PROVIDED PEN.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>WHEN I BRAKE UNDER THE FOLLOWING CONDITIONS:</p> <p><input checked="" type="radio"/> NORMAL BRAKING ON DRY PAVED ROADS. <input type="radio"/> PANIC STOP (BRAKING HARD) ON DRY PAVED ROADS. <input type="radio"/> AT HIGH SPEEDS (ABOVE 55 MPH). <input type="radio"/> AT LOW SPEEDS.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>WHEN MY VEHICLE'S ENGINE TEMPERATURE READS:</p> <p><input type="radio"/> COLD <input checked="" type="radio"/> NORMAL <input type="radio"/> HOT</p> </div>
<div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; padding: 5px 15px;">OK</div> <div style="border: 1px solid black; padding: 5px 15px;">BACK</div> <div style="border: 1px solid black; padding: 5px 15px;">HELP</div> </div>	<div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; padding: 5px 15px;">OK</div> <div style="border: 1px solid black; padding: 5px 15px;">BACK</div> <div style="border: 1px solid black; padding: 5px 15px;">HELP</div> </div>

Fig. 18D

Fig. 18C

STEERING AND SUSPENSION:

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM. PLEASE ONLY USE THE PEN PROVIDED TO YOU.

- 1. STEERING
- 2. SUSPENSION

1

2

BACK

HELP

STEERING INFORMATION:

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

- ☐ STEERING WHEEL SHAKES WHILE DRIVING.
- ☐ VEHICLE PULLS RIGHT WHILE DRIVING.
- ☐ VEHICLE PULLS LEFT WHILE DRIVING.
- ☐ VEHICLE WANDERS LEFT OR RIGHT WHILE DRIVING.
- ☐ STEERING WHEEL IS OFF-CENTER.
- ☐ TIRES ARE WEARING ABNORMALLY.
- ☐ STEERING WHEEL SEEMS HARD TO TURN.
- ☐ POWER STEERING MAKES ABNORMAL NOISES.
- ☐ NONE IF THE ABOVE SYMPTOMS.

OK

BACK

HELP

Fig. 19A

Fig. 19B

SUSPENSION INFORMATION:
TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

☐ FRONT END BOUNCES EXCESSIVELY WHILE DRIVING.
☐ REAR END BOUNCES EXCESSIVELY WHILE DRIVING.
☐ RIGHT FRONT SEEMS TO SAG.
☐ LEFT FRONT SEEMS TO SAG.
☐ RIGHT REAR SEEMS TO SAG.
☐ LEFT REAR SEEMS TO SAG.
☐ SUSPENSION NOISE OVER BUMPS.
☐ SUSPENSION SEEMS TOO SOFT.
☐ AUTO RIDE CONTROL LIGHT COMES ON.
☐ NONE OF THE ABOVE SYMPTOMS.

WHEN DOES IT HAPPEN:
WHEN DO YOU NOTICE THE SYMPTOM(S).
TOUCH THE APPROPRIATE BOX OR BOXES BELOW.

WHEN THE VEHICLE IS:
☐ ACCELERATING ☐ SLOWING DOWN OR STOPPING
☐ TURNING ☐ TURNING ON PAVED ROADS
☐ TURNING ON DIRT OR ROUGH ROADS
☒ DOESN'T MATTER

WHEN THE VEHICLES SPEED IS:
☐ NOT MOVING ☐ 0 TO 10 MPH
☐ 10 TO 35 MPH ☐ 35 TO 50 MPH
☐ OVER 55 MPH

OK BACK HELP

Fig. 19D

SUSPENSION INFORMATION:
TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

☐ FRONT END BOUNCES EXCESSIVELY WHILE DRIVING.
☐ REAR END BOUNCES EXCESSIVELY WHILE DRIVING.
☐ RIGHT FRONT SEEMS TO SAG.
☐ LEFT FRONT SEEMS TO SAG.
☐ RIGHT REAR SEEMS TO SAG.
☐ LEFT REAR SEEMS TO SAG.
☐ SUSPENSION NOISE OVER BUMPS.
☐ SUSPENSION SEEMS TOO SOFT.
☐ AUTO RIDE CONTROL LIGHT COMES ON.
☐ NONE OF THE ABOVE SYMPTOMS.

WHEN DOES IT HAPPEN:
WHEN DO YOU NOTICE THE SYMPTOM(S).
TOUCH THE APPROPRIATE BOX OR BOXES BELOW.

WHEN THE VEHICLE IS:
☐ ACCELERATING ☐ SLOWING DOWN OR STOPPING
☐ TURNING ☐ TURNING ON PAVED ROADS
☐ TURNING ON DIRT OR ROUGH ROADS
☒ DOESN'T MATTER

WHEN THE VEHICLES SPEED IS:
☐ NOT MOVING ☐ 0 TO 10 MPH
☐ 10 TO 35 MPH ☐ 35 TO 50 MPH
☐ OVER 55 MPH

OK BACK HELP

Fig. 19C

ELECTRICALLY OPERATED COMPONENTS

TOUCH THE APPROPRIATE BOX OR BOXES THAT BEST DESCRIBE THE AREA OF THE SYMPTOM.

☐ EXTERIOR LIGHT(S).
☐ INTERIOR LIGHT(S)
☐ WARNING GAUGES OR LIGHTS.
☐ HORN OR CIGAR LIGHTER / POWER SOCKET.
☐ WINDSHIELD WIPERS / WASHERS.
☐ REAR WINDOW DEFROSTER.

IF THE ABOVE DOESN'T SEEM TO DESCRIBE THE PROBLEM, TOUCH "BACK" THEN SELECT "POWER ACCESSORIES" AND LOOK THERE FOR A BETTER DESCRIPTION.

Fig. 20B

ELECTRICAL INFORMATION:

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM. PLEASE ONLY USE THE PEN PROVIDED TO YOU.

1. ELECTRICALLY OPERATED COMPONENTS

1. POWER ACCESSORIES.

Fig. 20A

POWER ACCESSORIES INFORMATION:

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

- ☐ **KEYLESS ENTRY / ALARM SYSTEM:**
- ☐ LIGHTED MIRRORS / POWER MIRRORS.
- ☐ AUTO DIM HEADLAMPS / INTERIOR LIGHTING.
- ☐ POWER SEAT ADJUSTMENT / COMFORT.
- ☐ AUDIO SYSTEMS / POWER ANTENNA.
- ☐ POWER WINDOWS / LOCKS / SUNROOF.
- ☐ CRUISE CONTROL.

IF THE ABOVE DOESN'T SEEM TO DESCRIBE THE PROBLEM, TOUCH "BACK" THEN SELECT "ELECTRICALLY OPERATED COMPONENTS" AND LOOK THERE FOR A BETTER DESCRIPTION.

OK

BACK

HELP

LET'S NARROW THE SEARCH:

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE PROBLEM.

- ☐ SCRATCHED
- ☐ MISSING
- ☐ LEAKS AIR
- ☐ LEAKS WATER
- ☐ TORN
- ☐ BLEMISHED
- ☐ LIFT MECHANISM
- ☐ FOLD MECHANISM
- ☐ WON'T LOCK / UNLOCK
- ☐ OUT OF ADJUSTMENT
- ☐ BROKEN
- ☐ CRACKED
- ☐ WARPED
- ☐ LOOSE
- ☐ COLOR FADES
- ☐ PEELING
- ☐ PITTED
- ☐ DOESN'T WORK
- ☐ NONE OF THE ABOVE

OK

BACK

HELP

Fig. 20C**Fig. 20D**

WHEN DOES IT HAPPEN:

WHEN DO YOU NOTICE THE SYMPTOM(S)
TOUCH THE APPROPRIATE BOX OR BOXES BELOW.

- ☐ WHEN I TURN THE SWITCH ON OR OFF.
- ☐ WHEN THE VEHICLE HITS A BUMP.
- ☐ WHEN I TRY TO MAKE AN ADJUSTMENT.
- ☐ WHEN I ADJUST THE VOLUME.
- ☐ WHEN I START THE VEHICLE.
- ☐ WHEN I TRY TO SET THE CONTROL.
- ☐ WHEN I OPEN A DRIVER-SIDE DOOR.
- ☐ WHEN I OPEN A PASSENGER SIDE DOOR.
- ☐ WHEN I OPEN THE TRUNK / HOOD.
- ☐ WHEN I TURN THE HEAD LIGHTS ON.
- ☐ NONE OF THE ABOVE.

OK

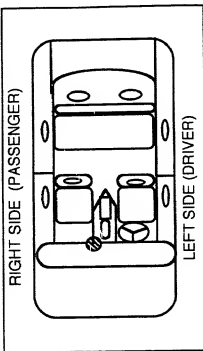
BACK

HELP

Fig. 20E**SELECT THE AREA IT IS LOCATED IN:**

TOUCH THE APPROPRIATE BOX OR BOXES THAT
BEST DESCRIBES WHERE THE PROBLEM
IS LOCATED.

PLEASE TOUCH THE AREA WHERE THE SYMPTOMS OCCURS:



CLEAR DOT

OK

BACK

HELP

Fig. 20F

OTHER SERVICES AVAILABLE:

PLEASE SELECT THE CATEGORY OF THE PROBLEM YOU ARE OBSERVING WITH YOUR VEHICLE.

1. SCHEDULED MAINTENANCE
2. UNSCHEDULED MAINTENANCE:
3. VEHICLE EXTERIOR.
4. VEHICLE INTERIOR.
5. SPECIAL ORDER PARTS/ RECALL NOTICE.
6. NEW OR USED CAR INTERNAL.
7. GENERAL PROBLEMS.

1 2 3 4 5 6 7

BACK

HELP

SCHEDULED MAINTENANCE:

YOUR VEHICLE'S CLOSEST SCHEDULED MAINTENANCE SERVICE HAS BEEN HIGHLIGHTED BELOW. PLEASE CHOOSE THE SERVICE YOU WISH TO HAVE PERFORMED BY TOUCHING THE APPROPRIATE MILEAGE. REFER TO YOUR MAINTENANCE SCHEDULE BOOKLET TO VIEW THE ITEMS PERFORMED IN THE SERVICE. IF YOU WISH TO CHANGE ANY PART OF THE SERVICE, SELECT HELP THEN #3

YOUR ENTERED MILEAGE IS: 12,500

☒ 12,000 MILES

☐ 18,000 MILES

☐ 6,000 MILES

☐ 24,000 MILES

OK

BACK

HELP

Fig. 21A

Fig. 21B

UNCHEDULED MAINTENANCE:

TOUCH THE BOX OR BOXES NEXT TO THE APPROPRIATE SERVICES YOU WOULD LIKE APPOINTED. PLEASE REFER TO YOUR VEHICLE'S MAINTENANCE SCHEDULE BOOKLET FOR MORE INFORMATION OF THE SERVICES BELOW. OR YOU CAN REQUEST A MAINTENANCE SHEET FROM ONE OF THE ASSISTANTS ON THE SERVICE AISLE.

- | | |
|--|----------|
| <input type="checkbox"/> EVERY 3000 MILES: | \$ 35.00 |
| <input type="checkbox"/> EVERY 6000 MILES: | \$ 55.00 |
| <input type="checkbox"/> EVERY 15,000 MILES: | \$ 85.00 |
| <input type="checkbox"/> EVERY 30,000 MILES: | \$100.00 |
| <input type="checkbox"/> EVERY 60,000 MILES: | \$125.00 |
| <input type="checkbox"/> VEHICLE ALIGNMENT, 2 WHEEL: | \$ 35.00 |
| <input type="checkbox"/> VEHICLE ALIGNMENT, 4 WHEEL: | \$ 75.00 |
| <input type="checkbox"/> VEHICLE INSPECTION: | \$35.00 |

OK

BACK

HELP

Fig. 21C

VEHICLE EXTERIOR:

THIS SECTION INCLUDES THE VEHICLE'S BODY AND RELATED EXTERIOR PARTS. PLEASE TOUCH THE APPROPRIATE AREA IN WHICH THE PROBLEM IS OCCURRING.

- ☐ BODY PANELS FIT AND FINISH.
- ☐ EXTERIOR SEALS (DOORS, SUNROOF, TRUNK ETC.)
- ☐ PLASTIC TRIM AND MOLDINGS.
- ☐ EXTERIOR MIRRORS, HANDLES, LOCKS AND BUTTONS.
- ☐ WHEELS OR SPARE WHEEL CARRIERS.
- ☐ PAINT AND / OR CLEARCOAT.
- ☐ REMOVEABLE HARDTOP / SOFT TOP CONVERTABLE.
- ☐ WINDSHIELD OR WINDOWS.
- ☒ EXTERIOR LIGHTS OR LIGHT COVERS.

OK

BACK

HELP

Fig. 21D

PROBLEM LOCATIONS:

TO HELP NARROW THE SEARCH, TOUCH THE WORD OR WORDS THAT BEST DESCRIBE WHERE THE PROBLEM IS LOCATED.

EXTERIOR LOCATIONS:

- ☒ EXTERIOR LIGHT.
- ☐ EXTERIOR LIGHT COVER

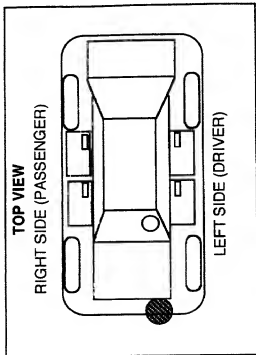
OK

BACK

HELP

VEHICLE EXTERIOR:

TOUCH THE LOCATION ON THE GRAPHIC BELOW TO SHOW THE LOCATION OF THE PROBLEM.



CLEAR DOT

OK

BACK

HELP

Fig. 21F**Fig. 21E**

VEHICLE INTERIOR:

THIS SECTION INCLUDES THE VEHICLE'S INTERIOR AND TRUNK AREA. PLEASE TOUCH THE APPROPRIATE NUMBER IN WHICH THE PROBLEM IS OCCURRING.

- ☐ SEATS OR SEAT CUSHIONS.
- ☐ CARPETING OR FLOOR MATS.
- ☐ DOOR PANELS OR INTERIOR SIDE PANELS.
- ☐ INTERIOR TRIM OR HEADLINER.
- ☐ DASH PANEL OR INSTRUMENT PANEL.
- ☐ INTERIOR KNOBS, HANDLES AND LATCHES.
- ☐ INTERIOR SWITCHES, BUTTONS, LOCKS AND SLIDES.
- ☐ WINDSHIELD OR WINDOWS.
- ☒ INTERIOR LIGHTING, INSTRUMENT PANEL LIGHTING.

OK

BACK

HELP

Fig. 21G

PROBLEM LOCATION:

TO HELP NARROW THE SEARCH, TOUCH THE WORD OR WORDS THAT BEST DESCRIBE WHERE THE PROBLEM IS LOCATED.

INTERIOR LOCATIONS:

- ☒ INTERIOR LIGHT.
- ☐ INTERIOR INSTRUMENT LIGHT.

OK

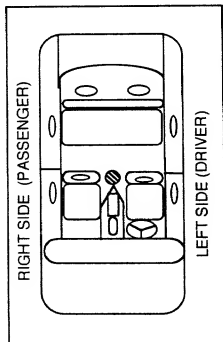
BACK

HELP

Fig. 21H

VEHICLE INTERIOR:

TOUCH THE LOCATION ON THE GRAPHIC BELOW
TO SHOW THE LOCATION OF THE PROBLEM.



CLEAR DOT

OK

BACK

HELP

PROBLEM DESCRIPTION:

TOUCH THE BOX OR BOXES NEXT TO THE WORD
OR PHRASE THAT BEST DESCRIBES THE PROBLEM.

- | | |
|--|--|
| <input type="checkbox"/> SCRATCHED | <input type="checkbox"/> OUT OF ADJUSTMENT |
| <input type="checkbox"/> MISSING | <input type="checkbox"/> BROKEN |
| <input type="checkbox"/> LEAKS AIR | <input type="checkbox"/> CRACKED |
| <input type="checkbox"/> LEAKS WATER | <input type="checkbox"/> WARPED |
| <input type="checkbox"/> TORN | <input type="checkbox"/> LOOSE |
| <input type="checkbox"/> BLEMISHED | <input type="checkbox"/> COLOR FADES |
| <input type="checkbox"/> LIFT MECHANISM | <input type="checkbox"/> PEELING |
| <input type="checkbox"/> FOLD MECHANISM | <input type="checkbox"/> PITTED |
| <input type="checkbox"/> WON'T LOCK / UNLOCK | <input type="checkbox"/> DOESN'T WORK |
| <input type="checkbox"/> NONE OF THE ABOVE | |

OK

BACK

HELP

Fig. 21I

Fig. 21J

SPECIAL ORDER / RECALL NOTICE:

IF YOU HAVE RECEIVED NOTIFICATION REGARDING AN ORDERED PART, TOUCH ONE. IF YOU HAVE RECEIVED A MANUFACTURER'S RECALL NOTICE REGARDING YOUR VEHICLE, TOUCH TWO. PLEASE PLACE THE NOTICE ON THE DASHBOARD AREA OF YOUR VEHICLE FOR THE SERVICE TECHNICIAN.

☐ SPECIAL ORDER PARTS NOTICE
☐ MANUFACTURE'S RECALL NOTICE

☐ NEW CAR INTERNAL
☐ USED CAR INTERNAL

Fig. 21L

NEW / USED CAR INTERNAL:

IF YOU HAVE A "NEW CAR INTERNAL REPAIR ORDER", PRESS ONE. IF YOU HAVE A "USED CAR INTERNAL REPAIR ORDER", PRESS TWO. PLEASE PLACE THE REPAIR ORDER ON THE DASHBOARD OF YOUR VEHICLE.

☐ NEW CAR INTERNAL
☐ USED CAR INTERNAL

Fig. 21K

THINGS YOU SEE:
TOUCH THE BOX NEXT TO THE WORD OR PHRASE THAT BEST DESCRIBE THE PROBLEM.

<input type="checkbox"/> SCRATCHED	<input type="checkbox"/> OUT OF ADJUSTMENT
<input type="checkbox"/> MISSING	<input type="checkbox"/> BROKEN
<input type="checkbox"/> LEAKS AIR	<input type="checkbox"/> CRACKED
<input type="checkbox"/> LEAKS WATER	<input type="checkbox"/> WARPED
<input type="checkbox"/> TORN	<input type="checkbox"/> LOOSE
<input type="checkbox"/> BLEMISHED	<input type="checkbox"/> COLOR FADES
<input type="checkbox"/> LIFT MECHANISM	<input type="checkbox"/> PEELING
<input type="checkbox"/> FOLD MECHANISM	<input type="checkbox"/> PITTED
<input type="checkbox"/> WON'T LOCK / UNLOCK	<input type="checkbox"/> DOESN'T WORK
<input type="checkbox"/> NONE OF THE ABOVE	

Fig. 21N

THIS SECTION OFFERS YOU A GENERAL DESCRIPTION OF THE VEHICLE'S PROBLEM AND PROVIDES THE TECHNICIAN WITH VITAL INFORMATION TO BEGIN A SUCCESSFUL REPAIR. IF YOU CAN'T FIND YOUR VEHICLE'S SYMPTOM IN THE MAIN MENU, PROCEED TO THE NEXT SCREEN BY TOUCHING **OK** BELOW, OR SEE YOUR SERVICE ADVISOR.

THERE ARE FOUR MAIN SENSES YOU HAVE THAT INDICATE A PROBLEM WITH YOUR VEHICLE. PLEASE CHOOSE THE MOST APPROPRIATE SENSE BELOW.

1. THINGS YOU SEE.

2. THINGS YOU HEAR.

3. THINGS YOU SMELL.

4. THINGS YOU FEEL.

Fig. 21M

THINGS YOU HEAR:

TOUCH THE BOX NEXT TO THE WORD OR PHRASE
THAT BEST DESCRIBE THE PROBLEM.

- | | |
|----------------------------------|---|
| <input type="checkbox"/> SQUEAK | <input type="checkbox"/> TAP |
| <input type="checkbox"/> RATTLE | <input type="checkbox"/> CLICK GRIND |
| <input type="checkbox"/> WHISTLE | <input type="checkbox"/> GROWL |
| <input type="checkbox"/> HUM | <input type="checkbox"/> KNOCK |
| <input type="checkbox"/> BUZZ | <input type="checkbox"/> METAL CLANG |
| <input type="checkbox"/> CHIRP | <input type="checkbox"/> RUMBLE |
| <input type="checkbox"/> SQUEAL | <input type="checkbox"/> NONE OF
THE ABOVE |
| <input type="checkbox"/> CLUNK | |

OK

BACK

HELP

Fig. 210

THINGS YOU SMELL:

TOUCH THE BOX NEXT TO THE WORD OR PHRASE
THAT BEST DESCRIBE THE PROBLEM.

- | |
|--|
| <input type="checkbox"/> BURNING SMELL |
| <input type="checkbox"/> MUSTY ODOR |
| <input type="checkbox"/> RAW FUEL SMELL |
| <input type="checkbox"/> ROTTEN-EGG SMELL |
| <input type="checkbox"/> EXHAUST LEAK |
| <input type="checkbox"/> ENGINE COOLANT SMELL |
| <input type="checkbox"/> BURNING BRAKE SMELL |
| <input type="checkbox"/> BURNING CLUTCH SMELL |
| <input type="checkbox"/> BURNING RUBBER SMELL |
| <input type="checkbox"/> NONE OF THE ABOVE SYMPTOMS. |

OK

BACK

HELP

Fig. 21P

THINGS YOU FEEL:

LISTED BELOW ARE EXAMPLES OF VIBRATIONS COMMONLY FOUND COMING FROM YOUR VEHICLE. TOUCH THE APPROPRIATE BOX OR BOXES THAT BEST DESCRIBE THE VIBRATION(S) YOU ARE FEELING

- | | |
|------------------------------------|--|
| <input type="checkbox"/> SHAKING | <input type="checkbox"/> SHUDDER |
| <input type="checkbox"/> THUMPING | <input type="checkbox"/> PULSATION |
| <input type="checkbox"/> TREMBLING | <input type="checkbox"/> MOAN |
| <input type="checkbox"/> BOOM | <input type="checkbox"/> ROUGHNESS |
| <input type="checkbox"/> BUZZING | <input type="checkbox"/> TINGLING |
| <input type="checkbox"/> CLUNK | <input type="checkbox"/> RUMBLE |
| <input type="checkbox"/> CHATTER | <input type="checkbox"/> SHIMMY |
| | <input type="checkbox"/> NONE OF THE ABOVE |

OK

BACK

HELP

Fig. 21Q**WHEN DOES IT HAPPEN:**

WHEN DO YOU NOTICE THE SYMPTOMS ? TOUCH THE APPROPRIATE BOX OR BOXES.

WHEN THE VEHICLE IS:

- ☐ ACCELERATING ☐ SLOWING DOWN OR STOPPING
☐ TURNING ON PAVED ROADS
☐ TURNING ON DIRT ROADS
☒ DOESN'T MATTER

WHEN THE VEHICLES SPEED IS:

- ☒ NOT MOVING ☐ 0 TO 10 MPH
☐ 10 TO 35 MPH ☐ 35 TO 50 MPH
☐ OVER 55 MPH

OK

BACK

HELP

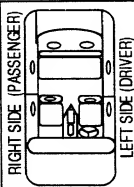
Fig. 21R

WHERE IS IT COMING FROM:

PLEASE INDICATE THE APPROPRIATE AREA THE NOISE AND/OR VIBRATION SEEMS TO COME FROM TOUCH THE LOCATION OF THE PROBLEM ON THE APPROPRIATE ILLUSTRATION.

INSIDE THE VEHICLE

RIGHT SIDE (PASSENGER)

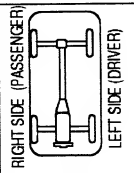


LEFT SIDE (DRIVER)

CLEAR DOT

UNDER THE VEHICLE

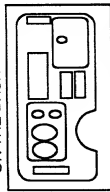
RIGHT SIDE (PASSENGER)



LEFT SIDE (DRIVER)

CLEAR DOT

ON THE DASH



CLEAR DOT

OK

BACK

HELP

GENERAL QUESTIONS:

AT JACK'S BMW WE ARE COMMITTED TO GIVING TO YOU THE BEST POSSIBLE SERVICE AND CORRECT REPAIR THE FIRST TIME. PLEASE HELP US BY ANSWERING THE FOLLOWING QUESTIONS. TOUCH THE APPROPRIATE BOX FOR EACH QUESTION.

OK

BACK

HELP

Fig. 22A

Fig. 21S

OTHER SYMPTOMS: _____
PLEASE TELL US ABOUT THE SYMPTOMS.

HOW OFTEN DOES THE SYMPTOM SHOW UP:
☒ ALWAYS ☐ SOMETIMES ☐ RARELY

WHEN DID THE PROBLEM BEGIN:
☐ AFTER LAST REPAIR ☒ JUST STARTED
☐ A FEW DAYS AGO ☐ MORE THAN A WEEK
☐ A FEW WEEKS ☐ MORE THAN A MONTH AGO

HAS THE PROBLEM BEEN WORKED ON BEFORE:
 YES ☒ NO ☐

WHEN THE PROBLEM OCCURS, THE WEATHER IS:
☐ HOT ☐ HUMID OR RAINY ☐ COOL
☐ FREEZING COLD ☒ DOESN'T MATTER

RETURN PROBLEM: _____
WHEN DO YOU NOTICE THE SYMPTOMS? TOUCH THE APPROPRIATE BOX OR BOXES.

HOW MANY TIMES HAS THE PROBLEM BEEN WORKED ON:
☒ ONCE ☐ TWICE ☐ THREE TIMES AND OVER

APPROXIMATELY HOW LONG AGO:
☒ A FEW DAYS AGO ☐ A WEEK TO TWO WEEKS
☐ A FEW WEEKS ☐ A MONTH AGO

HAS THE PROBLEM BEEN LOOKED AT BY ANYONE OTHER THAN THIS SERVICES DEPARTMENT:
 YES ☐ NO ☒

OK BACK HELP

Fig. 22C

OTHER SYMPTOMS: _____
PLEASE TELL US ABOUT THE SYMPTOMS.

HOW OFTEN DOES THE SYMPTOM SHOW UP:
☒ ALWAYS ☐ SOMETIMES ☐ RARELY

WHEN DID THE PROBLEM BEGIN:
☐ AFTER LAST REPAIR ☒ JUST STARTED
☐ A FEW DAYS AGO ☐ MORE THAN A WEEK
☐ A FEW WEEKS ☐ MORE THAN A MONTH AGO

HAS THE PROBLEM BEEN WORKED ON BEFORE:
 YES ☐ NO ☒

WHEN THE PROBLEM OCCURS, THE WEATHER IS:
☐ HOT ☐ HUMID OR RAINY ☐ COOL
☐ FREEZING COLD ☒ DOESN'T MATTER

OK BACK HELP

Fig. 22B

ADDITIONAL PROBLEMS: —

DO YOU HAVE ANY ADDITIONAL VEHICLE PROBLEMS OR MAINTENANCE REQUIREMENTS YOU WOULD LIKE TO HAVE ADDRESSED TODAY.

UNSCHEDULED SERVICES: —

WOULD YOU LIKE ANY OF THE FOLLOWING UNSCHEDULED SERVICES TO BE PERFORMED.

<input type="checkbox"/> COMPUTERIZED VEHICLE ALIGNMENT (EXTENDS TIRE LIFE, IMPROVES HANDLING)	\$ 95.00
<input type="checkbox"/> LUBE, OIL AND FILTER CHANGE (EXTENDS THE LIFE OF THE ENGINE AND SUSPENSION PARTS)	\$ 45.00
<input type="checkbox"/> MINOR TUNE-UP (IMPROVES FUEL MILEAGE AND GIVES QUICKER STARTS)	\$ 50.00
<input type="checkbox"/> VEHICLE DETAIL AND WASH (IMPROVES YOUR VEHICLE'S APPEARANCE)	\$25.00

OK BACK HELP

Fig. 24

ADDITIONAL PROBLEMS: —

DO YOU HAVE ANY ADDITIONAL VEHICLE PROBLEMS OR MAINTENANCE REQUIREMENTS YOU WOULD LIKE TO HAVE ADDRESSED TODAY.

ADD SYMPTOM

DONE BACK

Fig. 23

YOUR REPAIR ORDER:

LOOK OVER THE FOLLOWING PANELS. THEY HOLD A SUMMARY OF THE INFORMATION YOU JUST ENTERED. IF THE DESCRIPTIONS DON'T LOOK CORRECT TOUCH THE MODIFY BUTTON, IF YOU WANT TO DELETE ONE TOUCH DELETE.

USE THE "PREVIOUS" AND "NEXT" BUTTONS, BELOW, TO VIEW ITEMS NOT SHOWN.

VIBRATIONS

MODIFY

DELETE:

IT OCCURS WHEN THE VEHICLE IS MOVING - MOST LIKELY OCCURS WHEN I AM CRUISING AT A CONSTANT SPEED - AT WHAT SPEED(MPH): 20 TO 45 - SECTION B2 WAS CHOSEN FOR THE VEHICLE'S DASH - HOW OFTEN DOES THE SYMPTOM SHOW UP: ALWAYS - WHEN DID THE PROBLEM BEGIN: JUST STARTED - HOW MANY TIMES HAS THE PROBLEM BEEN WORKED ON: ONCE -- APPROXIMATELY HOW LONG AGO: A FEW DAYS AGO --

PREVIOUS

NEXT

OK

BACK

HELP

Fig. 25A

YOUR REPAIR ORDER:

LOOK OVER THE FOLLOWING PANELS. THEY HOLD A SUMMARY OF THE INFORMATION YOU JUST ENTERED. IF THE DESCRIPTIONS DON'T LOOK CORRECT TOUCH THE MODIFY BUTTON, IF YOU WANT TO DELETE ONE TOUCH DELETE.

USE THE "PREVIOUS" AND "NEXT" BUTTONS, BELOW, TO VIEW ITEMS NOT SHOWN.

SCHEDULED MAINTENANCE

MODIFY

DELETE:

SCHEDULED MAINTENANCE AT: 12,000 MILES--

PREVIOUS

NEXT

OK

BACK

HELP

Fig. 25B

ESTIMATED REPAIR COSTS:

THE ESTIMATED MAINTENANCE COST IS AS FOLLOWS:

VEHICLE ESTIMATE AND PICK-UP TIME:

YOUR PERSONAL SERVICE ADVISOR IS: _____
 HE OR SHE WILL CONTACT YOU AND PROVIDE
 YOU WITH ANY ESTIMATED REPAIR COSTS AND
 PICK-UP TIME FOR YOUR VEHICLE. IF YOU PREFER
 AN APPROXIMATE COST AND PICK-UP TIME NOW,
 SEE YOUR SERVICE ADVISOR AFTER COMPLETING
 YOUR REPAIR ORDER. PLEASE CHOOSE YOUR
 OPTION BELOW.

☒ PLEASE CONTACT ME
☐ I WOULD LIKE TO SEE THE ADVISOR.

OK BACK HELP

Fig. 27

ESTIMATED REPAIR COSTS:

THE ESTIMATED MAINTENANCE COST IS AS FOLLOWS:

TOTAL: \$ 0.00

PLEASE KEEP IN MIND THE ACTUAL COSTS MAY
 BE HIGHER OR LOWER THAN THE ESTIMATE.
 WE WILL CONTACT YOU IF THE COST OF
 THE REPAIR IS HIGHER THAN THE ESTIMATE.

OK BACK HELP

Fig. 26

PLEASE ACKNOWLEDGE THE FOLLOWING:

PLEASE ACKNOWLEDGE THE FOLLOWING: I HEREBY AUTHORIZE THE REPAIR WORK HERE SET FORTH TO BE DONE ALONG WITH THE NECESSARY MATERIAL AND AGREE THAT (DEALER) IS NOT RESPONSIBLE FOR LOSS OR DAMAGE TO VEHICLE OR ARTICLES LEFT IN VEHICLE IN CASE OF FIRE, THEFT OR ANY OTHER CAUSE BEYOND YOUR CONTROL OR FOR ANY DELAYS CAUSED BY UNAVAILABILITY OF PARTS OR DELAYS IN PARTS SHIPMENTS BY THE SUPPLIER OR TRANSPORTER. I HEREBY GRANT YOU AND FOR YOUR EMPLOYEES PERMISSION TO OPERATE THE VEHICLE HEREIN DESCRIBED ON STREETS, HIGHWAYS OR ELSEWHERE FOR THE PURPOSE OF TESTING AND/OR INSPECTION. AN EXPRESS MECHANIC'S LIEN IS HEREBY ACKNOWLEDGED ON VEHICLE TO SECURE THE AMOUNT OF REPAIRS THERE TO. A STORAGE FEE OF NOT MORE THAN TEN DOLLARS PER DAY, BEGINNING ON THE FORTH DAY, MAY BE CHARGED IF A MOTOR VEHICLE IS NOT REMOVED WITHIN THREE DAYS AFTER THE CUSTOMER IS NOTIFIED THAT REPAIRS HAVE BEEN COMPLETED, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS. **TERMS:** STRICTLY CASH CHECK OR APPROVED CREDIT CARD.

CUSTOMER ACKNOWLEDGES RECEIPT HEREOF:

PLEASE SIGN HERE:

ERASE SIGNATURE



OK

BACK

HELP

KEY DEPOSITING INSTRUCTIONS:

PLEASE DEPOSIT YOUR VEHICLE'S KEYS IN THE ENVELOPE PROVIDED. TEAR OFF THE ATTACHED RECEIPT AND PUT THE ENVELOPE IN THE IDENTIFIED LOCKING RECEPTACLE.

OK

BACK

HELP

Fig. 28**Fig. 29**

WAIT/ DROP OFF / LOANER SCREEN:

PLEASE ANSWER THE FOLLOWING QUESTIONS
SO WE CAN PREPARE FOR YOU.

ARE YOU WAITING FOR YOUR VEHICLE:

OYES ☒ NO

WOULD YOU LIKE A LOANER VEHICLE:

OYES ☒ NO

WOULD YOU LIKE TO RECEIVE THE
REPLACED PARTS:

OYES ☒ NO

OK BACK HELP

Fig. 30

A FINISHED REPAIR ORDER:

THANK YOU FOR CHOOSING
TO ASSIST IN YOUR SERVICE NEEDS. BUSINESS
CARDS ARE AVAILABLE AT THE DESK. IF YOU
HAVE ANY QUESTIONS, PLEASE CALL AT

SEND DATA

OK

HELP

A FINISHED REPAIR ORDER:

THANK YOU FOR CHOOSING
TO ASSIST IN YOUR SERVICE NEEDS. BUSINESS
CARDS ARE AVAILABLE AT THE DESK. IF YOU
HAVE ANY QUESTIONS, PLEASE CALL AT

DOWNLOAD COMPLETE

OK

HELP

Fig. 31A

Fig. 31B



ADVANCED
SERVICE
TECHNOLOGIES
INCORPORATED

REPAIR ESTIMATE

CONTROL NO. 553

DATE: 7/13/98

TIME: 7:54:15 PM

VEHICLE: DESCRIPTION: 2000X RAM 350/FORREST GREEN,2001 MILEAGE:33225 VIN:123456789 PLATE: BRT-1234

CUSTOMER: NAME: JOHN DOE PHONE #1: (303)333-4444 PHONE #2: (303)333-4445

ADDRESS: 1234 HIS WAY ST. CITY/ST/ZIP: ANYTOWN, USA 12345

ANTI-LOCK BRAKE SYSTEM

ANTI-LOCK BRAKE LIGHT IS ON CONSTANTLY.
ANTI-LOCK BRAKE LIGHT IS ON INTERMITTENTLY.
WHEN I BRAKE UNDER THE FOLLOWING CONDITIONS: NORMAL BRAKING ON DRY PAVED ROADS.
WHEN MY VEHICLE'S ENGINE TEMPERATURE READS: NORMAL
HOW OFTEN DOES THE SYMPTOM SHOW UP: ALWAYS
WHEN DID THE PROBLEM BEGIN: JUST STARTED
SHOW MANY TIMES HAS THE PROBLEM BEEN WORKED ON: THREE TIMES AND OVER
APPROXIMATELY HOW LONG AGO: A FEW DAYS AGO

ELECTRICALLY OPERATED COMPONENTS

INTERIOR LIGHT(S)
WARNING GUAGES OR LIGHTS.
HORN OR CIGAR LIGHTER / POWER SOCKET.
WHAT DID YOU NOTICE: CRACKED
WHAT DID YOU NOTICE: WARPED
WHAT DID YOU NOTICE: LOOSE
WHEN I START THE VEHICLE.
WHEN I TRY TO SET THE CONTROL.
WHEN I OPEN A DRIVER-SIDE DOOR.
WHEN I TURN THE HEAD LIGHTS ON.
SECTION C3 WAS CHOSEN FOR THE ELECTRICAL PROBLEM LOCATION.
HOW OFTEN DOES THE SYMPTOM SHOW UP: ALWAYS
WHEN DID THE PROBLEM BEGIN: JUST STARTED
HOW MANY TIMES HAS THE PROBLEM BEEN WORKED ON: THREE TIMES AND OVER
APPROXIMATELY HOW LONG AGO: A WEEK TO TWO WEEKS

(CONTINUED ON FIG. 32B)


(CONTINUED FROM FIG. 32A)

STEERING SYSTEM

VEHICLE PULLS RIGHT WHILE DRIVING.
VEHICLE PULLS LEFT WHILE DRIVING.
VEHICLE WANDERS LEFT OR RIGHT WHILE DRIVING.

TOTAL PARTS: _____ TOTAL LABOR: _____ MATERIALS COST: _____ TAX: _____ GRAND TOTAL: _____

AUTHORIZATION: I AUTHORIZE THE ABOVE WORK TO BE PERFORMED AND AGREE TO THE TERMS OF THIS REPAIR ORDER. FURTHERMORE, I RELEASE ANY AND ALL LIABILITY TO **RPM** ENTERPRISES, INC. ON THE ABOVE VEHICLE INCLUDING, BUT NOT LIMITED TO: DAMAGE, THEFT, FAILURE OF RELATED REPAIR ITEMS, AND EXPRESSED OR IMPLIED WARRANTY OF ALL INSTALLED PARTS.



SIGNATURE:

Fig. 32B

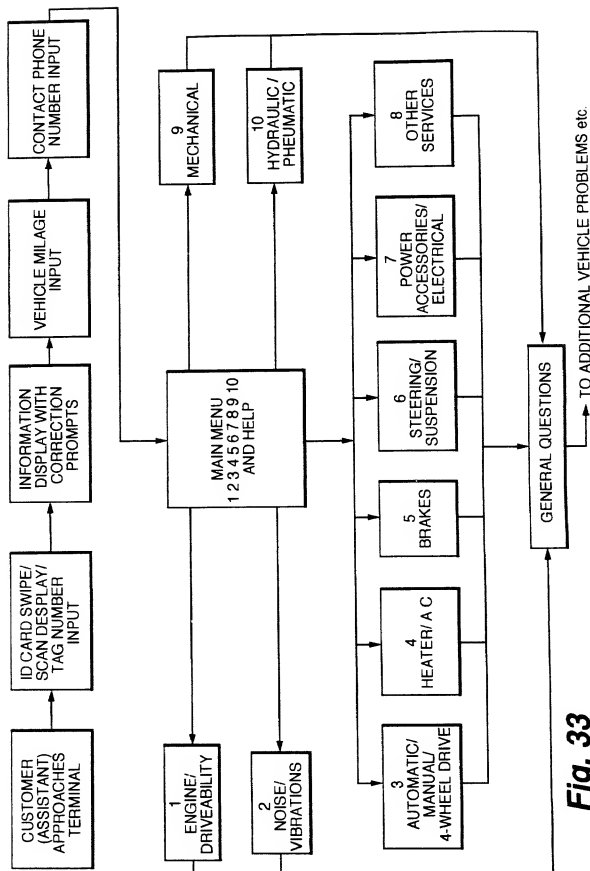


Fig. 33

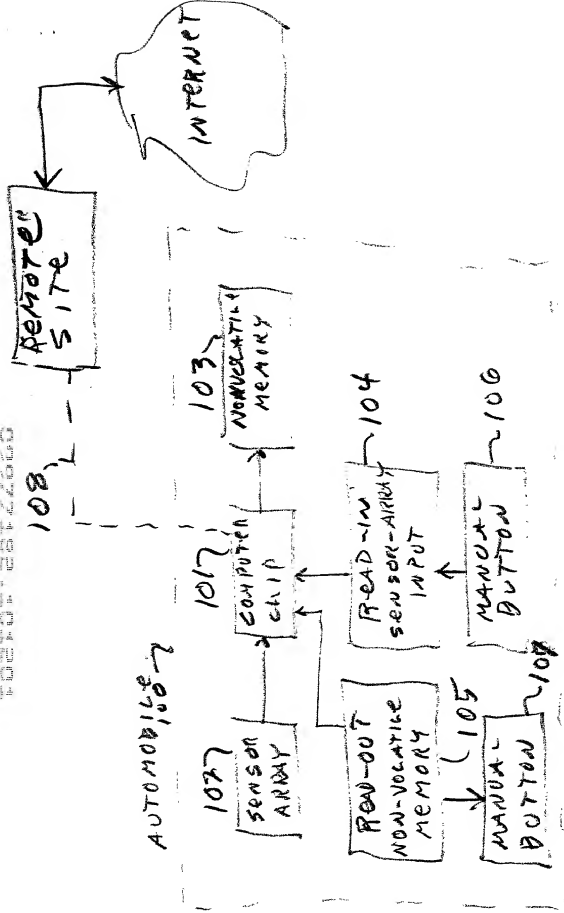


FIG. 35

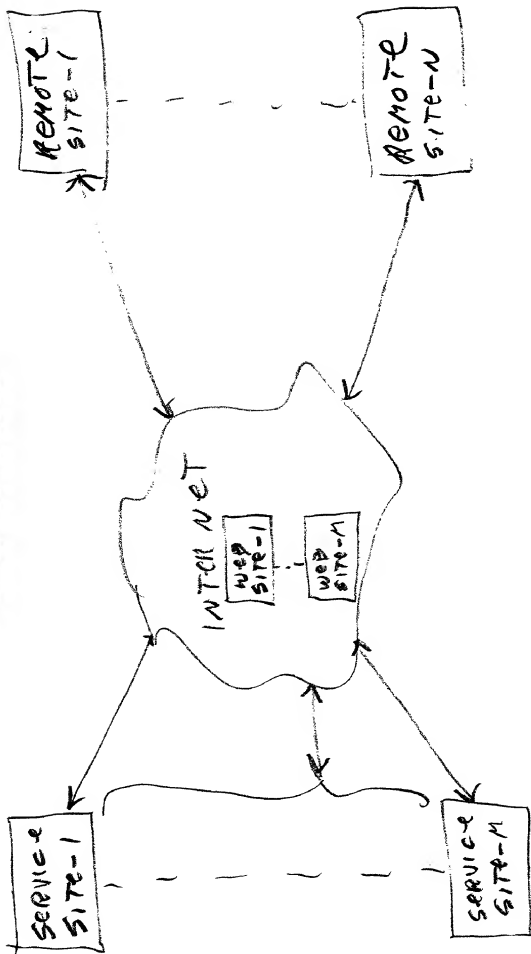


FIG-34

HEATER / AIR CONDITIONING:

THE FOLLOWING QUESTIONS ARE DESIGNED TO DELIVER VALUABLE INFORMATION TO THE SERVICE TECHNICIAN WHO WILL WORK ON YOUR VEHICLE. PLEASE TOUCH THE APPROPRIATE NUMBER FOR YOUR VEHICLE'S SYMPTOM. PLEASE ONLY USE THE PEN PROVIDED TO YOU.

1. HEATING SYSTEM.
2. AIR CONDITIONING SYSTEM
3. AUTO TEMPERATURE CONTROL SYSTEM

1 2 3

HELP

BACK

HEATING SYSTEMS:

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

- ☐ TEMPERATURE CONTROL SELECTOR IS HARD TO MOVE.
- ☐ VENT CONTROL SELECTOR IS HARD TO MOVE.
- ☐ DOESN'T DELIVER HOT AIR.
- ☐ TAKES TOO LONG TO DELIVER HOT AIR.
- ☐ DEFROST INOPERABLE OR FOGS UP.
- ☐ ENGINE TEMPERATURE GAUGE DOESN'T MOVE OFF OF COLD.
- ☐ UNUSUAL ODORS WHEN OPERATING.
- ☐ AIR DOESN'T FLOW FROM ALL OUTLETS PROPERLY.
- ☐ NONE OF THE ABOVE SYMPTOMS.

OK

BACK

HELP

Fig. 17A**Fig. 17B**

AIR CONDITIONING SYSTEMS:

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

- ☐ TEMPERATURE CONTROL SELECTOR IS HARD TO MOVE.
- ☐ VENT CONTROL SELECTOR IS HARD TO MOVE.
- ☐ DOESN'T DELIVER COLD AIR.
- ☐ TAKES TOO LONG TO DELIVER COLD AIR.
- ☐ TEMPERATURE CHANGES UNEXPECTEDLY.
- ☐ UNUSUAL ODORS WHEN OPERATING.
- ☐ DOESN'T FLOW FROM ALL OUTLETS PROPERLY.
- ☐ A/C COMPRESSOR SEEMS TO CYCLE TOO OFTEN.
- ☐ NONE OF THE ABOVE SYMPTOMS.

OK

BACK

HELP

Fig. 17C

AUTOMATIC TEMPERATURE CONTROL SYSTEM:

TOUCH THE APPROPRIATE BOX OR BOXES THAT DESCRIBES THE SYMPTOM.

- ☐ TEMPERATURE READING IS INACCURATE.
- ☐ BUTTONS ON THE CONTROL UNIT ARE INOPERABLE.
- ☐ TAKES TOO LONG TO DELIVER ACCURATE TEMPERATURE.
- ☐ NONE OF THE ABOVE SYMPTOMS.

OK

BACK

HELP

Fig. 17D